

REPORT OF THE CIVIL AERONAUTICS BOARD
on the
Investigation of an Accident Involving Aircraft
During Instrument Instruction Flights

A mid-air collision which occurred near Phoenix, Arizona, about 1:45 p.m. on October 26, 1943, resulted in fatal injuries to War Training Service Instructor Rudolf Schad and his student, Milford Dan Birch. Schad, age 47, held a commercial pilot certificate with single-engine land, C-675 h.p., instrument and flight instructor ratings. He had flown approximately 4146 solo hours, around 175 of which were during the last 90 days. Birch, a War Training Service trainee, held a student pilot certificate and was receiving instrument flight instruction at the time of the accident. The aircraft, a Piper J5A, NC 35704, owned by the Defense Plant Corporation, Washington, D. C., and being operated by Southwest Airways, Inc., was demolished. The occupants of the other plane involved, Army Instructor T. C. Galbraith and his student, David H. Jarvis, escaped injury. Galbraith held a commercial pilot certificate with single-engine land, C-230 h.p., and flight instructor ratings. He had flown approximately 2300 hours, 1500 of which were instruction time training Army cadets. Jarvis, an Army cadet, had accumulated about 211 hours of flight time, and was receiving instrument instruction at the time of the accident. The Army aircraft, a North American AT-6, Army No. 41688, received major damage to the left wing tip, aileron, and stabilizer.

WTS Instructor Schad, with his student, was cleared from Sky Harbor Airport, Phoenix, Arizona, about 12:40 p.m. and Army Instructor Galbraith, with his student, was cleared from Falcon Field about 1:00 p.m., both on routine instrument training flights. Galbraith stated that after leaving Falcon Field, which is located approximately 20 miles east of Phoenix, they climbed to 4000 feet and flew to the Phoenix radio range, where he directed his student to the southwest quadrant of the range. At a point several miles southwest of the range the student (under the hood) made a number of 360° turns to lose himself, then started to work out his orientation problem, flying at 4000 feet, speed 120 m.p.h., heading 300°. This course had been held for approximately three minutes, when upon entering the west leg of the Phoenix range from the southwest quadrant, both occupants of the Army plane felt a severe jar. Immediately thereafter the instructor and the student, who had lowered the hood, observed another plane in a revolving, diving attitude, minus its left wing. Instructor Galbraith immediately radioed the Falcon Field Control Tower and informed them that he had just collided with a civilian aircraft, whereupon the Falcon Field operator immediately notified Sky Harbor Airport of the accident. Galbraith stated that due to loss of the outer half of his left aileron, a portion of the trailing edge and tip of the left wing and the damage to the left stabilizer, he had considerable difficulty controlling the plane in level flight. However, by use of full throttle and full right aileron, he was able to return and land at his base.

The Piper struck the ground in a nose-down position of approximately 60° and was completely demolished. Its left wing was found approximately 500 feet from the fuselage. The aircraft was so completely demolished that little could be learned of its condition prior to the collision. Evidence

indicated that the left wing tip of the Army aircraft and the Piper's forward left diagonal lift strut had met at a location approximately 8 inches out from its fuselage fitting, breaking the securing bolt. The rear spar of the Piper's left wing was splintered and broken off about one foot out from the fuselage which allowed the wing to fall free. Both safety bolts were found unfastened and as the occupants were equipped with parachutes it might appear that they had made an effort to leave the aircraft and been unable to do so.

Examination of the Army plane disclosed that it had lost about 4 feet of the outboard end of the left aileron and 29 inches of the outboard end of the left wing. These parts were found in the vicinity of the wrecked Piper.

From all the information gathered during the investigation, it appears that the Army AT-6 was flying at an altitude of 4000 feet, on a heading of 300°, while the Piper was at the same altitude or slightly above the Army plane, and on a heading of about 81°, when the collision occurred. It further appears that neither instructor saw the other. The Army instructor stated that he could not remember what he was doing at the time of the collision. His student, being under the hood, naturally knew nothing of the accident until he felt the impact.

During the investigation it was learned that a verbal agreement had been made whereby Falcon Field would conduct its instrument training at 4000 feet and Southern Airways would carry on their instrument training at 3500 feet. However, if the information furnished by the Army instructor and student is correct, it appears that the Southern Airways trainer was 500 feet above the 3500-foot altitude. The overcrowded condition in the Phoenix area has been a matter of concern to the CAA aeronautical inspectors for some time. There is no specific procedure provided for the controlling of instrument flight training in this area and apparently flight instructors are on their own when they leave the airport. While there is a great deal of traffic, this fact is well known and had either instructor involved exercised proper vigilance, the accident would have been avoided.

The fact that both flights were engaged in instrument instruction had a bearing on the accident only to the extent that this type of instruction called for more alertness on the part of the instructor-pilots, as the students were flying the airplanes by instruments, under the hood, while the instructors had clear, unobstructed vision ahead and on both sides at all times.

Although the lack of a coordinated program for altitude and area control of flight activities may be considered a contributing factor to this accident, the direct cause was carelessness and lack of vigilance on the part of both instructors involved in failing to observe and avoid other aircraft.

BY THE BOARD

/s/ Fred A. Toombs
Secretary